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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,487	12/11/2001	Tong Sun	KCC-16,156	5645 13
35844	7590	10/02/2003	EXAMINER	
PAULEY PETERSEN KINNE & ERICKSON			KUMAR, PREETI	
2800 WEST HIGGINS ROAD			ART UNIT	
SUITE 365			PAPER NUMBER	
HOFFMAN ESTATES, IL 60195			1751	

DATE MAILED: 10/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/017,487

Applicant(s)

SUN ET AL.

Examiner

Preeti Kumar

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-75 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-75 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:

**DETAILED ACTION**

***Non-Final Rejection***

1. Claims 1-75 are pending.
2. The rejection of claims 1-75 are rejected under 35 U.S.C. 103(a) as obvious over Herron et al. (US 5,137,537) is maintained for the reason recited in the previous office action paper no.5, dated January 3, 2003 and further explained below.

***Response to Arguments***

3. Applicant's arguments filed September 12, 2003 have been fully considered but they are not persuasive.

Applicant's urge that Herron et al. fail to disclose or suggest treating the fibers with sodium hydroxide, or another intra-crystalling swelling agent prior to applying the crosslinking agent to the fibers.

However, the examiner draws attention to the example in the instant application which discloses "BELCLEN DP80 polymeric reactive compound and sodium hypophosphite catalyst...to provide intrafiber crosslinking. The wetted SMSM-CR54 fibers, polymeric reactive compound, and catalyst were thoroughly mixed in a mixer...". Please see the amended example that was inserted into page 20 of the specification. Thus, the examiner does not see support or basis for the argument that "...the present invention is applied to the fibers and is subsequently washed away from the fibers, thereby forming curly fibers. After the intra-crystalline swelling agent has been washed away the polymeric reactive compound is then applied to the fibers..." as stated on page 13 of paper no. 12.

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Furthermore, the examiner would like to reiterate that merely reversing or changing the order of the steps in a process does not impart patentability when no unexpected result is obtained. Ex Parte Rubin (POBA) 128 USPQ 440 Cohn V. Comr. Pats. (DCDC 1966) 251 FSUPP 378, 148 USPQ 486 ; 29 USPQ 493 ; 38 USPQ 181. Furthermore, applicants have not provided any additional data or showing of unexpected or unobvious results to overcome the rejection of record as recited in paper no. 8, dated 5/6/03.

Applicant's also urge that Herron et al. do not disclose or suggest chemically treating cellulosic fibers with an intra-crystalline swelling agent and instead disclose mechanically curled, individualized fibers that are crosslinked. However, Herron et al. teach treatment with the same components in the same process to provide curly cellulose fiber as recited by the instant claims. Specifically, Herron et al. teach that maintaining the fibers in substantially individual form during drying and crosslinking allows the fibers to twist during drying and thereby be crosslinked in such twisted, curled state. Also, in example I, Herron et al. illustrate in steps 2 and 3, that the fibers are treated with sodium hydroxide and carboxylic acid and then in step 4, Herron et al. illustrate the deqatered fibers are defibrated and as the individualized fibers exit the refiner, they are flash dried with hot air in two vertical tubes in order to provide fiber twist and curl. See col.24, ln.19-21. The instant process as stated in the example recites that the fibers are individualized using a fiberizer. The individualized fibers are then cured to initiate intrafiber crosslinking. Thus, it is not seen how the intrafiber crosslinking as

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taught by Herron et al. is mechanical and the intrafiber crosslinking as taught by the instant application is chemical.

**Conclusion**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 703-305-0178. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on 703-308-4708. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-872-9309.

Preeti Kumar  
Examiner  
Art Unit 1751

PK

  
YOGENDRA N. GUPTA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700